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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,370	12/15/2000	Kevin C. Davis	554-258 (Davis 1)	2410

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EXAMINER

CHANG, EDITH M

ART UNIT	PAPER NUMBER
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2634

7

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,370

Applicant(s)

DAVIS, KEVIN C.

Examiner

Edith M Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's argument, see page 6, filed April 21 2004, with respect to 35 U.S.C. 112 has been fully considered and is persuasive. The rejection of claim 10 has been withdrawn, a new ground of rejection is made in view of Henderson et al. (US 4868516).

2. Applicant's arguments, see pages 7 to 16, filed April 21 2004 with respect to claims 1-9, 11-20 have been fully considered but they are not persuasive. The reasons are the following:

Argument: Claim 1, 18, and 20, McGinn fails to teach, suggest or disclose each and every element of the Applicant's claimed invention, arranged as in the Applicant's claims.

Response: McGinn discloses a transmission line tap circuit (Fig.2), comprising: at least two input terminals (2 & 3 Fig.2); circuitry configured to provide an impedance load (Abstract, 23 & 27 Fig.2); circuitry configured to amplify the received transmission signal (20 Fig.1/21&25 Fig.2); circuitry configured to provide an impedance match to an impedance load (Fig.1/Fig.2 51-64); and at least two output terminals configured for coupling the transmission signal (64 & SUPERVISION Fig.2) as *cited in the claim*. Refer the rationale of the claim 1, 18, and 20 in the following rejection section.

Argument: Page 8, In support of the Applicant's invention with respect to at least claim 1, the Applicant, in the specification, specifically recites:.....

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Response: The limitations (e.g. page 2, line 18 through page 3, line 3 of the specification stated in the arguments) in the specification do not read in the claim when these limitations are *not recited in the claim* (see MPEP 2111).

Argument: Page 9 lines 4-5, there is absolutely no teaching, suggestion or disclosure in McGinn for a single stage balanced amplification circuit.

Response: The limitation of “a single stage balanced amplification circuit” is not recited in the claim. The limitations in the specification do not read in the claim when these limitations are *not recited in the claim* (see MPEP 2111).

Argument: Page 13 the second paragraph, McGinn does not teach “at least two input terminals configured for coupling to a transmission line”.

Response: The terminal 2 & 3 of Fig. 1/Fig.2 of McGinn are the two input terminals of the telephone transmission line to receive the ring and tip signals.

The rejections are upheld as the following:

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9, 11-14, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by McGinn (US 5333192).

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Regarding **claims 1, 18 & 20**, McGinn discloses a transmission line tap circuit/means and its methods comprising (2-40 Fig. 1/Fig. 2): at least two input terminals (2 & 3 Fig. 2 are two input terminals) configured for coupling to a transmission line (TIP and RING Fig. 1/Fig. 2 are the two wire of the telephone transmission line, column 2 lines 46-50); circuitry/means configured to provide an impedance load to the transmission line for tapping the transmission line (Abstract, 23 & 27 Fig. 2) and receiving a transmission propagating there through (Fig. 1/Fig. 2 wherein the transmission propagating there through from 2 & 3 to SUPERVISION & 64); circuitry/means configured to amplify the received transmission signal (20 Fig. 1/21 & 25 Fig. 2 is the circuitry configured to amplify the received transmission signal); circuitry/means configured to provide an impedance match to an impedance load at least one line interface unit (LIU) (Fig. 1/Fig. 2 51-64 is the LIU, column 3 lines 12-21 & column 4 lines 4-17, lines 39-48, Fig. 2 is the circuitry configured to provide an impedance match to an impedance load at least one LIU via at least two output means 64 & SUPERVISION, the amplified signal/the output of 25 to the LIU); and at least two output terminals configured for coupling the transmission signal to the at least one LIU (64 & SUPERVISION Fig. 2 are the two output terminals/means to the telephone facility via a hybrid circuit: column 3 lines 13-17 & column 5 lines 38-43 wherein the line signal is applied to the output terminals).

Regarding **claim 2**, McGinn discloses the circuitry configured to provide the impedance load to the transmission line, the circuitry configured to amplify the received transmission signal, and the circuitry configured to provide the impedance match to the LIU are provided within a single stage (Fig. 2, they are provided with in a single stage).

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Regarding **claim 3**, McGinn discloses the circuitry configured to provide the impedance load to the transmission line includes at least two resistors where a first of the at least two resistor is connected to a first of the at least two input terminals (23 connected to the terminal 2 Fig.2) and a second of the at least two resistors is connected to a second of the least two input terminals (27 connected to the terminal 3 Fig.2).

Regarding **claim 4**, McGinn discloses a circuitry configured to block direct current present in the received transmission signal (24&28 Fig.2).

Regarding **claim 5**, McGinn discloses the circuitry configured to block direct current including at least a first capacitor connected to a first of the at least two input terminals (24 connected to terminal 2 Fig.2) and a second capacitor connected to a second of the at least two input terminals (28 connected to terminal 3 Fig.2).

Regarding **claim 6**, McGinn discloses a dissipation load for the received transmission signal (12-14a-14b/15a-15b-13 Fig.2, column 5 lines 17-24).

Regarding **claim 7**, McGinn discloses the circuitry configured to proved a dissipation load for the received transmission signal including at least two resistors connected in series and coupled to the at least two input terminals (12-14a-14b connected to the two input terminals 2 & 3 Fig.2).

Regarding **claim 8**, McGinn discloses the circuitry configured to suppress noise in the received transmission signal and to shape the received transmission signal (7 Fig.2).

Regarding **claim 9**, McGinn discloses the circuitry configured to suppress noise providing a capacitor value which can be supplied with two capacitors in series and coupled to

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the two input terminals and the other end of the capacitors connected together to the ground as the electrical characteristic of the capacitor ($C = \text{current/voltage}$).

Regarding **claim 11**, McGinn discloses a dissipation load to the circuitry configured to amplify the received transmission signal (40 Fig.2).

Regarding **claim 12**, McGinn discloses the dissipation load is in parallel to the circuitry configured to amplify the received transmission signal and includes at least two resistors connected in series (41&43 Fig.2 are two resistors, 40 Fig.2 is in parallel to the 21 & 25 Fig.2).

Regarding **claim 13**, McGinn discloses a circuitry configured to block direct current from the circuitry configured to amplify the received transmission signal (34&44 Fig.2).

Regarding **claim 14**, McGinn discloses the circuitry configured to block direct current including at least two capacitors connected in series and coupled to the two output terminals (Fig.2 34&44 are two capacitors connected in series, 34 coupled to TIP/2 terminal and 44 coupled to RING/3 terminal).

Regarding **claim 17**, McGinn discloses gain adjustment circuitry configured to adjust the gain of the circuit (21/25 Fig.2, column 4 lines 59-65, the circuitry 21-22-29-25-26 is the gain adjustment circuitry).

Regarding **claim 19**, McGinn discloses the steps of blocking direct current present in the received transmission signal (24&28 Fig.2); providing a dissipation load for the received transmission signal (12/13 Fig.2, column 5 lines 17-24); and suppressing noise in the received transmission signal (7 Fig.2 suppresses the noise).

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGinn (US 5333192) in view of Henderson et al. (US 4868516).

Regarding **claim 10**, McGinn discloses two amplifiers each having respective feedback resistor, however does not specify the capacitors. Further Henderson et al. teaches the amplifier having capacitor parallel to the feedback resistor (C_f & R_f FIG.1/ 214 & 216 FIG.2). As the McGinn's circuit using the operational amplifier with the parasitic capacitance coupled to the inputs of the operational amplifier, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to have the capacitor in parallel to the feedback resistor taught by Henderson et al. in McGinn's amplifier to control the frequency response of the amplifier (column 1 lines 15-29, lines 35-44).

7. Claim 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGinn (US 5333192) in view of Koenig et al. (US 5881148).

Regarding **claims 15 & 16**, McGinn does not explicitly specify the T1 and E1 of the telephone line, however Koenig et al. teaches the T1 (E1 is the equivalent European standard). As the McGinn's circuit used in telephone line, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the circuit to the T1/E1 transmission line

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to provide a complete T1/E1 channel bank process to solve line interface problem efficiently
(Abstract).

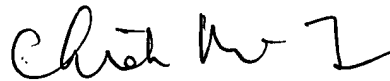
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 703-305-3416. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
June 23, 2004


CHIEH M. FAN
PRIMARY EXAMINER